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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/626,026	07/27/2000	Ashok Sengupta	54942USA4A.002	9991

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EXAMINER

LEVY, NEIL S

ART UNIT PAPER NUMBER

1615

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/626,026	<b>Applicant(s)</b> SENGUPTA ET AL.	
	<b>Examiner</b> NEIL LEVY	<b>Art Unit</b> 1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 45 and 49-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 45 and 49-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 45 and 49-56 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 45, 49-56 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Haase et al 4647476

The instant polyurethane type polymers, utilizing polyisocyanates (col 4, lines 36-45) and reactive hydrogens with quarternary ammonium addition products, resulting in at least one end cap of the ammonium compound, soluble in water (col 11) are disclosed. Tables 1 and 5 show examples. Applications are at col 15, 16.

Claims 45, 49-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gould et al 4451635 in view of Green et al 3931319 and Vandergaard 4110286.

Gould prepares polyurethanes from active hydrogen compounds, glycols, and polyisocyanates (col 3, lines 7-11) to form water soluble compositions (col 4, lines 34-42) suitable for coating and manufacturing (col 4, lines 40-54) that are partially end capped with quarternary ammonium groups (col 3, line 55; col 4, line 6).

Gould is silent as to antimicrobial efficacy, but since the quarternary ammonium is added to the polymer, it is the composition as claimed, and so, would function the same.

Although the patent office can not conduct testing, since the Gould products are reacted across the polymer formed as of the instant polymer, some reactive units would be available as end cap units, then reacted with the quarternary ammonium. Applicant has not provided any objective evidence that Gould can not provide end capped polymer.

Green specifically address the means of providing any polymer water soluble, with end capped quarternary ammonium in order to impart antimicrobial efficacy (col 1, top and example 4).

The primary reference discloses the essence of the instant invention as claimed, but does not specify each and every element of the instantly claimed compositions. However, the secondary references directed at the similar same compositions to solve the same problem of the primary reference do provide these additional elements.

All the critical elements of the instant invention are disclosed.

Art Unit: 1615

It would have been obvious to a person of ordinary skill in the art at the time the invention was made desiring to utilize polyurethanes, for coating, to use any of art recognized means, as of Gould and Vandergaard, as shown by Green to provide an antimicrobial effect. The process of making the polyurethane is not given patentable weight as to the composition claimed.

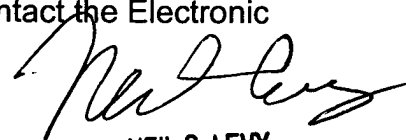
Applicant's arguments filed 11/21/05 have been fully considered but they are not persuasive. . applicant's arguments are that Vandergaard is not water soluble, but examiner question of degree of water solubility of the instant invention was not addressed. We agree Cooper is not polyurethane, and withdraw. However, the prior art does show water soluble polyurethanes, with quarternary ammonium groups, and in formation of such polymers, would be expected to have the ammonium compounds on some terminal polyurethane ends. Instant Claim 51 in fact refers to 45 as an dispersion, not solution, polymer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NEIL LEVY whose telephone number is 571-272-0619.

The examiner can normally be reached on Tuesday-Friday, 7 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THURMAN PAGE can be reached on 571-272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
NEIL S. LEVY  
PRIMARY EXAMINER